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December 22, 2004

TO: Each Supervisor

FROM: Thomas L. Garthwaite, MD  
Director and Chief Medical Officer

Jonathan E. Fielding, MD, MPH  
Public Health Director and Health Officer

SUBJECT: **WEST NILE VIRUS ACTIVITY - FINAL REPORT**

On April 27, 2004, the Board approved a motion by Supervisor Michael D. Antonovich, directing the Directors of Health Services and Public Health to implement the Department's planned West Nile Virus (WNV) awareness and surveillance program and to provide monthly updates. This is our final WNV update for 2004, encompassing WNV surveillance findings and control activities up to December 10, 2004.

**BACKGROUND**

Nationally in 2004, 2,359 WNV cases have been confirmed by the Centers for Disease Control and Prevention (CDC), with 40 states and the District of Columbia reporting human WNV cases and 47 states and the District of Columbia reporting non-human WNV surveillance data as of December 10, 2004. In 2004, California (CA) had the greatest number of reported confirmed WNV human cases in the United States with 737 reported; Los Angeles County (LAC) reported more cases (305) than any other local health department in CA.

**LOS ANGELES COUNTY WNV SURVEILLANCE ACTIVITIES—2004**

To enhance timely human disease identification and enact localized prevention efforts to limit additional cases, laboratory-documented WNV infection was added to the list of mandated reportable diseases and conditions in Los Angeles County (California Code of Regulations, Title 17, Sections 2503 and 2505). Physicians and laboratories must report patients with a positive WNV test to LAC DHS within one (1) working day. Surveillance in Los Angeles County also includes the reporting of domestic animal cases as well as screening of wild birds and mosquitoes for evidence of WNV infection.

Thirty-nine additional WNV cases have been confirmed since our report of 25 October 2004, bringing the 2004 confirmed WNV case total to 305. Of these cases, 23 individuals were asymptomatic blood donors (attachment). The 282 symptomatic WNV cases included: 144 WNV fever cases, 83 meningitis cases, 48 encephalitis cases, and 7 cases of acute flaccid paralysis (AFP). There were 196 males (ages 5-93 years) and 109 females (ages 13-91 years), with 13 deaths. There were 10 cases in children under 18 years of age with no deaths.

The median age of patients with WNV fever was 51 years (6-91 years) and 59 years (5-93 years) for individuals with WNV neuro-invasive disease (meningitis, encephalitis, or AFP). The thirteen fatalities had a median age of 77 years (59-91 years). WNV cases were concentrated in the San Gabriel Valley (112 cases), Eastern LAC (77 cases), and the San Fernando Valley (82 cases). As seen in the attachment, it appears that human WNV activity peaked in early August with cases continuing to occur throughout September and October; the last WNV case reported symptom onset on October 25, 2004.

In addition to human WNV cases, WNV positive dead birds, mosquito pools, and sentinel chickens were identified through October. As of December 10, 2004, 839 WNV-positive dead birds were confirmed in LAC, just over 27 percent of the number of infected birds identified for the entire state (3,080 birds). The last dead WNV-positive bird was identified on October 14, 2004 in Agoura Hills. Once WNV was established throughout the county, dead bird collection by the Health Department was discontinued in most areas. However, telephoned reports of dead birds continued to be taken since these reports provided an on-going indicator of presumed WNV activity and helped focus mosquito containment activities.

## **VECTOR CONTROL**

Since mosquitoes serve as vectors for disease transmission, WNV-positive mosquito pools are another critical environmental indicator; as such, mosquito pools are routinely tested for the presence of WNV. As of December 3, 2004, 390 pools tested positive in Los Angeles County, nearly one-third of the identified positive mosquito pools in California (1,136 pools). The last positive mosquito pool in LAC was identified on October 21, 2004 from Harbor City.

In an effort to help protect the public health from the threat of WNV disease, the Department funded a one year agreement with local mosquito and vector control districts to provide mosquito abatement services to all areas of the county not currently within the jurisdiction of a control district. At least 186,000 persons reside in such regions.

## **FUTURE PLANNING EFFORTS**

From now through the spring of 2005, the following activities are planned to coordinate WNV surveillance and prevention:

- Bi-monthly WNV Task Force Meetings with Acute Communicable Disease Control (ACDC) Program, Veterinary Public Health, Environmental Health and the local mosquito abatement districts will continue. The Task Force promotes coordination of surveillance activities and prevention efforts.
- ACDC will continue to participate in the statewide semi-annual WNV Task Force meetings to improve WNV surveillance and cooperation with neighboring local health departments.
- ACDC will be participating in the 6<sup>th</sup> National West Nile Virus Conference February 2005 in San Jose, CA, and presenting the 2004 Los Angeles County WNV surveillance data.

December 22, 2004

Each Supervisor

Page 3

- ACDC will coordinate with the Office of Health Assessment and Epidemiology to review community survey data on WNV prevention activities such as use of DEET-based mosquito repellant, and other individual and community prevention activities.
- Environmental Health will work with cities that did not have prior mosquito abatement district contracts and ensure that steps are being taken to have protection in place for 2005.

## **CONCLUSION**

It is highly likely that WNV will remain endemic to Southern CA and LAC in 2005 and the years to come. It is difficult to predict which areas of LAC will be most heavily impacted by the WNV in 2005.

TLG:RC:sc

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## **Attachments**

c: Chief Administrative Officer  
County Counsel  
Executive Officer, Board of Supervisors



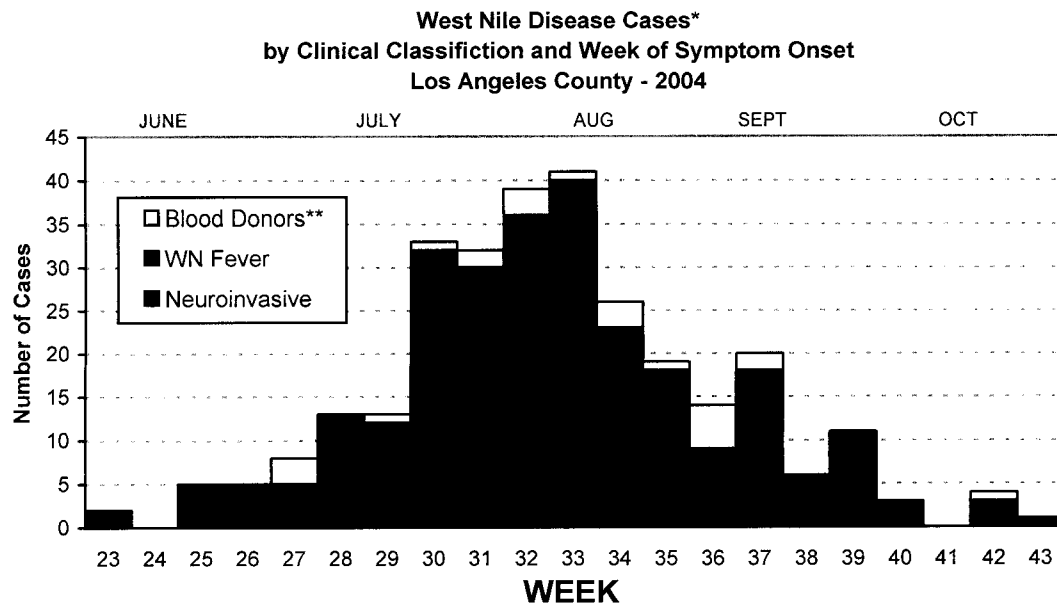
## WEST NILE VIRUS: Weekly Epidemiology Report (December 10, 2004)

### West Nile Virus Case Characteristics Los Angeles County, 2004<sup>1</sup>

	Total #	Information Unknown <sup>2</sup>	Clinical Presentation						Demographics	
			Blood Donor	WN Fever	Neuro-invasive	Neuroinvasive Diagnosis	Hospitalized <sup>3</sup>	Deaths	Gender ratio (M / F)	Median Age (range)
<b>TOTAL to date<sup>7</sup></b>	305	0	23	144	138	48 = Encephalitis 83 = Meningitis 7 = Acute Flaccid Paralysis	189	13	1.8 / 1	53 yrs (5-93 yrs)

1. Excludes cases in Long Beach and Pasadena. Totals are provisional and subject to change.
2. Cases reported positive by State DHS, but clinical and demographic information is excluded or pending.
3. Hospitalized at time of diagnosis and may not reflect current clinical status.
4. The week of case confirmation does not necessarily reflect the week of illness onset. On average, LAC WNV cases are confirmed 23 days after illness onset.
5. Cumulative case total as of 12/07/04.

LOCATION	TOTAL to date
SPA 1: Antelope Valley	0
SPA 2: San Fernando	82
SPA 3: San Gabriel	112
SPA 4: Metro	14
SPA 5: West	2
SPA 6: South	7
SPA 7: East	77
SPA 8: South Bay	5
Residence Unknown <sup>5</sup>	6
<b>TOTAL</b>	305



\* Preliminary data 12/07/04: N= 295; does not include 10 cases with unknown onset

\*\* Blood donors listed by date of donation.

**Dead Birds Identified with West Nile Virus by ZIP Code  
Los Angeles County, 11/18/2004**

**West Nile virus-infected dead birds:**

WNV-infected dead birds have been recovered from nearly all areas of Los Angeles County.

